

REMARKS

In the Office Action the Examiner noted that claims 1-10 are pending in the application, and that claims 4-10 have been withdrawn from consideration. The Examiner rejected claims 1-3. By this Amendment, claim 1 has been amended, claims 2 and 4-10 have been cancelled without prejudice or disclaimer, and new claims 11-12 have been added. Thus, claims 1, 3, and 11-12 are pending in the application. No new matter has been presented. The Examiner's rejections are traversed below, and reconsideration of all rejected claims is respectfully requested.

Claim Rejections Under 35 USC §102

In item 3 on pages 5-6 of the Office Action the Examiner rejected claims 1-3 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,733,050, issued to Grafius (hereinafter referred to as "Grafius"). The Applicants respectfully traverse the Examiner's rejections of these claims.

Claim 1 of the present application, as amended, recites "a rotating member rotatably supported by said base member about a rotation axis, and tip member holding means for holding said tip member and disposed on said rotating member at a position that is offset from said rotation axis of said rotating member." The Applicants respectfully submit that at least these features are not disclosed or suggested by Grafius.

The Examiner stated that Grafius disclosed a base jig 110 with a loading spindle 138 rotatable through rotary motor 130, and unloading spindle 140 located at a position offset from the rotation axis of loading spindle 138, and the tip holding member of unloading spindle 140 adapted to hold the tool tip member 12 so that a central axis of relative rotation for threadably mounting the tool tip member to the tool body extends substantially parallel to the rotation axis of loading spindle 138 and rotation of the tool tip member 12 with respect to the rotating member of the unloading spindle 138 is locked. Therefore, the Examiner has apparently characterized the loading spindle 138 as the rotating member of claim 1 of the present application, and the unloading spindle 140 as the tip member holding means of claim 1.

However, claim 1 of the present application recites the tip member holding means as being disposed on said rotating member. Conversely, the unloading spindle 140 of Grafius is clearly not disposed on the loading spindle 138, which the Examiner characterized as the rotating member, but is disposed at a distance away from the loading spindle 138.

Therefore, Grafius does not disclose at least the feature of "a rotating member rotatably supported by said base member about a rotation axis, and tip member holding means for holding said tip member and disposed on said rotating member at a position that is offset from said rotation axis of said rotating member." Accordingly, Grafius does not disclose every element of the Applicants' claim 1. In order for a reference to anticipate a claim, the reference must teach each and every element of the claim (MPEP §2131). Therefore, since Grafius does not disclose the features recited in independent claim 1, as stated above, it is respectfully submitted that claim 1 patentably distinguishes over Grafius, and withdrawal of the §102(b) rejection is earnestly and respectfully solicited.

Also, claim 1 of the present application, as amended, recites a controller which "controls the operation of said robot arm of said robot to move said tool body around said rotation axis while keeping said tool body in contact with said tool tip member by said tip member holding means." The Applicants respectfully submit that at least these features are not disclosed in Grafius.

In the Examiner's discussion of claim 2 of the present application, the features of which have been incorporated into claim 1 by this Amendment, the Examiner stated that Grafius discloses the controller "controlling the operation of the robot arm to move the tool body around the rotation axes of loading and unloading spindles while keeping the tool body in contact with the tool tip member held by the tip member holding means for mounting and demounting the tool tip member 12 (see col. 5, lines 32-40, for example)." However, this statement by the Examiner is apparently contradicted by the disclosure of Grafius. The section of Grafius cited by the Examiner merely states that the robot arm 10 is moved between the various stages of the instant apparatus under the control of its programmable controller which also controls the operation of the various pneumatic devices (Column 5, Lines 35-40). Further sections of Grafius disclose that the rotary pneumatic motor 130 is activated so as to cause the rotation of the first gear 134 and the second gear 136, thereby rotating the load spindle 138 and the unload spindle 140, respectively (Column 9, Lines 65-68), the rotation of the unload spindle 140 causes the weld tip 12 to be unscrewed from the welding robot arm 10 (Column 10, Lines 3-5), and the welding arm 10 is then lowered above the load spindle 138 which is continuously rotating with the replacement weld tip 12 therein so that the replacement weld tip 12 is screwed onto the robot arm 10 (Column 10, Lines 25-29). In other words, in the welding robot arm 10 disclosed in Grafius, a weld tip 12 is mounted on or dismounted from the welding robot arm 10 by rotating the unloading spindle or loading spindle but not by moving the tool body (or the welding head 18) around the rotation axis of the loading spindle 138. Therefore, conversely to claim 1 of the

present application, Grafius does not disclose or suggest a controller which "controls the operation of said robot arm of said robot to move said tool body around said rotation axis while keeping said tool body in contact with said tool tip member by said tip member holding means." Thus, claim 1 also patentably distinguishes over Grafius due to the lack of these features in Grafius.

By this Amendment, claim 2 has been cancelled without prejudice or disclaimer.

Claim 3 depends from claim and includes all of the features of that claim plus additional features which are not taught or suggested by Grafius. Therefore, it is respectfully submitted that claim 3 also patentably distinguishes over Grafius.

In item 4 on pages 6-7 of the Office Action the Examiner rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,845,834, issued to Watson (hereinafter referred to as "Watson"). The Applicants respectfully traverse the Examiner's rejection of claim 1 in regard to Watson.

As discussed above in regard to Grafius, claim 1 of the present application, as amended, recites a controller which "controls the operation of said robot arm of said robot to move said tool body around said rotation axis while keeping said tool body in contact with said tool tip member by said tip member holding means." The Applicants respectfully submit that at least these features are also not disclosed in Watson. Therefore, claim 1 also patentably distinguishes over Watson, and the Applicants respectfully request the withdrawal of the Examiner's rejection of this claim.

Claim Rejections Under 35 USC §103

In item 6 on page 7 of the Office Action the Examiner rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over Grafius. The Applicants respectfully traverse the Examiner's rejection claim 3.

As discussed in the previous section of this Amendment, claim 1 patentably distinguishes over Grafius. Further, claim 3 depends from claim 1 and includes all of the features of that claim plus additional features which are not taught or suggested by Grafius. Therefore, it is respectfully submitted that claim 3 also patentably distinguishes over Grafius.

In items 7-8 on pages 8-9 of the Office Action the Examiner rejected claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Watson in view of Grafius. The Applicants respectfully traverse the Examiner's rejections of these claims.

As discussed in the previous section of this Amendment, neither Grafius nor Watson disclose the features of a controller which “controls the operation of said robot arm of said robot to move said tool body around said rotation axis while keeping said tool body in contact with said tool tip member by said tip member holding means.” Therefore, the Applicants respectfully submit that claim 1 patentably distinguishes over the cited references, and further respectfully requests the withdrawal of the Examiner’s §103 rejection of claim 1.

Also, neither Grafius nor Watson discloses or suggests, either alone or in combination, the tip member holding means having “a rotation locking member for locking the relative rotation of said tool tip member with respect to said tip member holding means”, as is also claimed in claim 1 of the present application. Therefore, claim 1 also patentably distinguishes over the cited references for this reason.

By this Amendment, claim 2 has been cancelled without prejudice or disclaimer.

Claim 3 depends from claim 1 and includes all of the features of that claim plus additional features which are not taught or suggested by the cited references. Therefore, it is respectfully submitted that claim 3 also patentably distinguishes over the cited references.

New Claims 11-12

New claim 11 depends from claim 1 and includes all of the features of that claim plus additional features which are not taught or suggested by the cited references. Therefore, it is respectfully submitted that claim 11 also patentably distinguishes over the cited references.

New claim 12 recites the feature of “a controller to control the operation of the robot arm to move the tool body around the rotation axis while keeping the tool body in contact with the tool tip member by the tip member holder.” Therefore, it is respectfully submitted that claim 12 also patentably distinguishes over the cited references.

Summary

In accordance with the foregoing, claim 1 has been amended, claims 2 and 4-10 have been cancelled without prejudice or disclaimer, and new claims 11-12 have been added. No new matter has been presented. Thus, claims 1, 3, and 11-12 are pending and under consideration.

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There being no further outstanding objections or rejections, it is respectfully submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 03/22/06

By: Thomas L. Jones
Thomas L. Jones
Registration No. 53,908

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

CERTIFICATE UNDER 37 CFR 1.8(a)

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STAAS & HALSEY

By: Shirley R. Baker
Date: 3/22/06